REMARKS

A. Status of the Claims

Claims 13-22 were pending at the time of the Action. Claims 13, 18, and 20 have been amended. Claims 16 and 17 have been canceled. No new matter has been added by these amendments. Claims 13-15 and 18-22 are pending and presently under consideration in the case.

B. The Sequence Compliance Objection Is Overcome

The Action objects to claim 20 that contains an amino acid sequence which is not accompanied by a sequence identifier. Applicants have amended claim 20 to add the appropriate sequence identifier. Applicants, therefore, request the withdrawal of this objection.

C. The Rejections Under 35 U.S.C. § 112 Are Overcome

The Action rejects claim 18 under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Action identifies that the claim recites a dependency to itself. Claim 18 has been amended to depend on claim 13. In light of the current amendment the rejection is moot.

D. The Rejections Under 35 U.S.C. § 103 (a) Are Overcome

The Action rejects claims 13-22 as being obvious over Fritz *et al.* (WO 02/32451) in view of Egyed *et al.* (WO 01/93903). The Action cites Fritz as teaching a composition comprising a viral antigen and a $KLKL_5KLK$ peptide. The Action also cites Fritz as suggesting the addition of an immunostimulatory nucleic acid. Egyed is cited by the Action as teaching a 26 nucleic acid poly-$d(IC)_{13}$. Thus, the Action asserts that it would have been obvious to combine the teachings of Fritz and Egyed to arrive at the presently claimed invention. Applicants traverse this rejection.

Although Fritz discloses a $KLKL_5KLK$ peptide and Egyed discloses oligo $d(IC)_{13}$, no disclosure is provided of the specific combination of elements recited in current claim 13. In *KSR*, the Supreme Court stated that "a patent composed of several elements is not proved

obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR*, 127 S.Ct. 1727, 1741 (2007). The Supreme Court noted that when the combined elements work together in an unexpected and fruitful manner, this is evidence that the combination was not obvious. *Id.* The working examples in the present specification demonstrate that the combination of an influenza virus antigen, Peptide A, and an I-/U-ODN induced immune responses at levels that would not have been expected from studies of influenza virus antigen with either Peptide A or I-/U-ODN alone.

For example, the study described in Example 1 of the present specification compared the immune responses induced by the commercially available flu vaccine Fluvirin alone and adjuvanted with $Al(OH)_3$ or various ODNs and/or cationic peptides. Example 1 of the specification, illustrated by FIG. 1, demonstrated that the combination of cationic peptides and ODNs synergistically induced very potent antigen-specific humoral type 1 responses (IgG2b). In particular, FIG. 1 shows that the combination of Peptide A and I-/U-ODNs provided a many-fold increase in the induction of an antigen-specific immune response humoral type 1 responses (IgG2b) as compared to the humoral type 1 responses (IgG2b) induced by Fluvirin or Fluvirin adjuvanted with $Al(OH)_3$, an I-U/ODN, or a Peptide A alone. In view of the low IgG2b titers achieved with Fluvirin or Fluvirin adjuvanted with $Al(OH)_3$, an I-/U-ODN, or a Peptide A alone, the high IgG2b titer achieved when Fluvirin was administered with both Peptide A and an I-/U-ODN was surprising.

In addition, the potent immune response induced by the combination of Peptide A and I-/U-ODNs with the commercially available flu vaccines Fluvirin and Agrippal S1 was demonstrated in Examples 2-4. These studies showed, for example, that the flu vaccine Agrippal S1 adjuvanted with KLK and oligo $d(IC)_{13}$ induced synergistically stronger cellular and humoral immune responses than Agrippal S1 alone (Example 3). Accordingly, the data in the

specification demonstrate that the elements recited in the currently claimed vaccine work together in an unexpected and fruitful manner, which is evidence that the current claims are non-obvious. *See* 127 S.Ct. at 1741. Applicants, therefore, request the withdrawal of this rejection.

E. Double Patenting

The Action raises several obviousness-type double patenting rejections. Claims 13-21 are provisionally rejected for obviousness-type double patenting over claim 39 of co-pending U.S. Application 10/399,442. Claims 13-21 are provisionally rejected for obviousness-type double patenting over claim 69 of co-pending U.S. Application 10/478,771. Claims 13-21 are provisionally rejected for obviousness-type double patenting over claims 42 and 50 of co-pending U.S. Application 10/297,555.

A provisional double-patenting rejection is not a final rejection that blocks the prosecution of all of the conflicting applications. If a provisional double-patenting rejection is the only rejection remaining in an application, the Examiner should withdraw the rejection and permit the application to issue as a patent. MPEP § 804(I)(B).

Claims 13-21 are rejected for obviousness-type double patenting over claim 1 of U.S. Patent 7,148,191. Applicants traverse this rejection.

Domination and double patenting should not be confused, as they are two separate issues. MPEP § 804. Although a first patent may have a broad or generic claim that "dominates" an invention defined in a more specific claim in another patent or application, this by itself cannot support a double patenting rejection. MPEP § 804. The Action must establish that a nonstatutory obviousness-type double patenting rejection is appropriate by showing that the allegedly conflicting claims are either anticipated by, or would have been obvious over, the reference claims. MPEP § 804. In this regard, the Action alleges that the pending claims are

obvious over the claims of the '191 patent. However, even if the Action established a *prima facie* case, sufficient evidence exists to rebut that *prima facie* case.

One way for an Applicant to rebut a *prima facie* case of obviousness is to show that the claimed invention exhibits some superior property or advantage that a person of ordinary skill in the relevant art would have found surprising or unexpected. *See, e.g., In re Pravin*, 54 F.3d 746, 750 (Fed. Cir. 1995). As discussed in the preceding section, the working examples in the present specification demonstrate that the combination of an influenza virus antigen, Peptide A, and I-/U-ODN was surprisingly effective at inducing immune responses. Thus, while the '191 patent claims a more generic invention, the present application claims a more specific invention that works surprisingly well. This evidence rebuts the alleged obviousness. Applicants, therefore, request the reconsideration and withdrawal of this rejection.

F. Conclusion

Applicants believe this paper to be a full and complete response to the Office Action dated July 1, 2008. Applicants respectfully request favorable consideration of this case in view of the above comments and amendments.

Should the Examiner have any questions, comments, or suggestions relating to this case, the Examiner is invited to contact the undersigned Applicants' representative at 512/536-5654.

Respectfully submitted,

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